

Attorney Docket No.: J6834(C)
Serial No.: 10/667,922
Filed: September 22, 2003
Confirmation No.: 9900

REMARKS

The present amendment is submitted in an earnest effort to advance the case to issue without delay.

Applicant has amended independent claims 1, 10 and 11 by removing the term “*zea mays*” from each. This returns these claims to their original form. The reason for this amendment is that the type of starch is an unnecessary limitation in view of the applied prior art. Dependent claims reciting “*zea mays*” have been added as claims 18 and 19. New claims 20 and 21 have support at page 7 [00019]. Several other claim changes have been submitted. These are all directed to remove any potential claim informalities such as improper antecedent basis.

An Appeal Brief was submitted April 4, 2008. The Examiner has acknowledged the submittal. Curiously the Examiner has stated that the arguments and amendments “are not deemed to be persuasive” (emphasis added). Yet the Examiner has not responded with an Answer to the Appeal Brief. Instead, she has vacated “the finality of the Office Action”. Ordinarily a Vacation indicates that the Examiner has found at least some merit in the arguments presented.

Claims 1-6 and 8-17 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 5,925,380 (Roullier et al.) in view of U.S. Patent 6,248,338 (Muller et al.) and as a further evidenced by U.S. Patent 5,382,611 (Steptoe et al. I) and its equivalent EP 0 282 451 A2 (Steptoe et al. II). Applicant traverses this rejection.

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Applicant's invention is distinguished from the references by the feature of fragrance being deposited onto the solid carrier that comprises destructurezied starch. Neither Rouiller et al., Muller et al. nor Steptoe et al. (I or II) disclose this feature. A *prima facie* case of obviousness has not been established.

Rouiller et al. discloses an expanded solid composition having a matrix formed from a starch-rich component and containing at least some expanded thermoplastic hollow particles. These compositions were said to be useful for cosmetic or dermatological purposes. Specific products include powdered color cosmetics and dry shampoos.

Nowhere in this reference is any mention of destructurezied starch components. Although Rouiller et al. utilizes an extruder in the process, the reference emphasizes that extrusion be limited to temperatures below 100°C. See column 1 (lines 24-26); column 5 (lines 38-41); and Examples 1 and 2 at column 6 (lines 37 and 67).

Temperatures at which Rouiller et al. extrude are insufficient to destructurezied starch. Applicant directs attention to the disclosure of Steptoe et al. I which requires elevated temperatures to achieve destructurezied. The temperatures are stated to be in the range of 100° to 200°C, and most preferably between 160°C to 185°C. See column 3 (lines 32-38); column 6 (lines 52-53); column 7 (line 6); Table 1 (fifth column) and column 9 (lines 22-24). Operation at temperatures below 100°C as in Rouiller et al. would not achieve the desired destructurezied of starch. Accordingly, Rouiller et al. neither expressly nor inherently discloses the presently claimed destructurezied starch element.

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Another deficiency is the absence of any fragrance mentioned by Rouiller et al. Yet if the skilled chemist were to add fragrance, the reference suggests that the extruded compositions because of the lower processing temperatures "can thus contain cosmetic or dermatological substances which are heat-sensitive or unstable at temperatures above 100°C". See column 1, lines 24-29.

Muller et al. is a reference that unabashedly focuses on pre-gelatinized starch. See the Abstract and column (line 43). This contrasts with the destructured starches necessary for the present invention. Indeed, Muller et al. specify that a decisive feature of the invention is that the starch derivative to be used according to the invention is "pre-gelatinized". See column 3, lines 35-37.

Perfumes are formulated into the Muller et al. compositions. Most of the Examples have formulas with perfume as a component. The perfume is mixed with the pre-gelatinized starch in an aqueous system. An intimate mixture of perfume dispersed with starch throughout the composition is thereby achieved. The Examiner has directed attention to the following statement by Muller et al.: "The composition according to the invention can be provided in any form, for example, as solution, emulsion, suspension, gel or foam. It can also be provided as a dry powdery composition which is reconstituted in an aqueous medium upon use" (col. 5, lines 11-15). Yet even in a dry powdery form, perfume will be distributed internally along with starch and other ingredients of the disclosed composition. Not taught is that the perfume must separately be applied as a deposit onto the overall solid carrier.

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In the Office Action at page 5 (first full paragraph), the Examiner considers that in Muller et al. "that fragrance would be interspersed with the starch and therefore, found on the starch."

Applicant has further amended the independent claims to address this issue. Thus, claim 1 (ii) now recites a fragrance deposited onto the solid carrier comprising the destructure starch. Parallel amendments have been made to independent claims 10 and 11. Neither Rouiller et al. nor Muller et al. teach or suggest depositing fragrance onto any of their compositions that might be in solid form. Applicant further notes that claim 1 (iii) requires that the solid carrier besides starch have at least one cosmetic agent. Any fragrance deposited must be deposited onto the combination of starch/cosmetic agent. This is not the same as merely mixing the perfume with starch in a solid formula.

Stepoe I and II (which are essentially identical texts) teach the existence of destructure starch. No mention is made regarding use of this type of starch in cosmetic compositions. Neither is there mention of any fragrance or perfume.

A combination of Rouiller et al. in view of Muller and Stepoe et al. (I and II) would not render the instant invention obvious. Neither directly nor inherently does Rouiller et al. teach a destructure starch. Secondly, fragrance is not disclosed. If the skilled chemist were to learn anything from Muller et al., it would be to avoid all but pre-gelatinized types of starch. Consequently, the chemist is still left without direction on the proper starch or on how a fragrance is to be incorporated into the starch.

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Step toe I and II reveal the deconstructurized form of starch. Yet the skilled chemist is taught by Rouiller that an essential feature must be to process at temperatures below 100°C. This is not how to achieve deconstructurization. There would be no motivation to incorporate deconstructurized starch into Rouiller et al. Neither would the skilled chemist incorporate deconstructurized starch into Muller et al. The latter specifically teaches a need for pre-gelatinization which is a different starch transformation. And none of the references provide any disclosure to deposit fragrance onto the solid carrier that comprises the deconstructurized starch. A *prima facie* case of obviousness has not been presented.

Deconstructurized type starch is not an arbitrary selection. Applicant has demonstrated in their specification under Example 21 certain surprising results. Therein it is shown that deconstructurized starch in comparison to an unmodified (native) starch was much superior in expressing fragrance over a prolonged period of time. Thus, there is an experimental basis for the selection of a deconstructurized starch as an advantageous carrier for a surface deposited fragrance.

In the Office Action at page 6 (first full paragraph), the Examiner has a discussion apparently relevant to U.S. Patent 5,736,209 (Andersen et al.). Applicant is uncertain as to whether the Examiner intends the document to be an applied reference (i.e. in combination with Rouiller et al., Muller et al. and Steptoe et al. I and II). Nonetheless, applicant does have some comment with respect to the paragraph at page 6.

Andersen et al. was presented as support that starch binders are sticky once dissolved or gelatinized in water. Stickiness complicates manufacturing since sheets are articles with high starch loading tend to stick to their molds. Further, the Examiner

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explains that unmodified starch granules also have drawbacks. A stated problem of unmodified starch granules is that they are generally insoluble in water and thereby act as merely passive fillers in wet systems. The theory is then presented that one needs to avoid the gelatinized and also the unmodified (native) starches. Ergo, destructurized starches would have neither of these deficiencies.

There are many problems with this reasoning. Most problematical is that the references (Rouiller et al. and Muller et al.) themselves find benefit in starches other than destructurized ones. Muller et al. is very clear to use a pre-gelatinized variety. Rouiller et al. does not characterize the state of starch after processing. But the conditions of less than 100°C are not likely to produce destructurization. Consequently, there is no motivation to substitute the preferred starches of the references with some theoretical advantage culled from Andersen et al.

Further the claimed compositions of the present invention are solids. Little if any water is normally present. Absent water, a non-modified starch granule even though insoluble, would not be a detriment. Neither would a pre-gelatinized starch. Any process to manufacture a solid composition must by definition eliminate to a large extent liquid matter. Removal of water would remove stickiness. In some instances a sticky component would even be a preferred one. Solids can be aggregates and these may indeed require a binder much like brick and mortar. In summary, there are as many reasons to utilize pre-gelatinized and/or non-modified starches as there are motivations against their use.

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In view of the foregoing amendment and comments, applicant requests the Examiner to reconsider the rejection and now allow the claims.

Respectfully submitted,

A handwritten signature in black ink, reading "Milton L. Honig". The signature is written in a cursive style with a horizontal line underneath the name.

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